

Referring now to FIG. 7, the hydraulic system of the present invention is shown in schematic diagram. A conventional twelve volt deep cycle marine battery 130 will power the hydraulic pump 128 for an entire day. The battery may then be charged overnight and during the day from the vehicle's charging system to operate the yard waste handling apparatus 10. Safety switch 126 interconnects the supply and return lines of hydraulic pump 128 with the hydraulic circuit 132 of the yard waste handling apparatus. Safety switch 126 prevents accidental operation of any of the hydraulic cylinders on the apparatus 10 until switch 126 is activated.

As shown in FIG. 7, the first actuator lever 116 connects the hydraulic lines to cylinder 108 to selectively pivot the hopper 90. Second actuator lever 118 is hydraulically connected to cylinder 86 to selectively raise and lower lift arm 84. Third actuator lever 120 is hydraulically connected cylinder 66 on scissors hoist 64 to selectively pivot dump box 32 between the storage and dumped positions. Fourth hydraulic lever 122 is connected to cylinder 76 to selectively open and close front wall 58 of dump box 32. Finally, fifth actuator lever 124 is connected to cylinder 44 to selectively raise and lower tailgate 18.

Whereas the invention has been shown and described in connection with the preferred embodiment thereof, many modifications, substitutions and additions may be made which are within the intended broad scope of the appended claims.

We claim:

1. A yard waste handling apparatus, comprising:
  - a wheeled frame means having a frame with forward and rearward ends, and opposing side members;
  - a dump box operably mounted on the forward end of the frame for pivotal movement between a loading position at rest on said frame and a dumping position pivoted relative to said frame;
  - said dump box having an open upper end, opposing forward and rearward walls, opposing front and back walls, and a bottom;
  - said dump box front wall operably connected to the dump box for movement between open and closed positions; and
  - means for selectively pivoting the dump box, connected between the dump box and said frame; and
  - means for selectively moving the dump box front wall, connected between the front wall and dump box.
2. The apparatus of claim 1 wherein said dump box is pivotally mounted along a front edge of the bottom to one of said frame side members.
3. The apparatus of claim 2 wherein said dump box includes a support beam extending between front ends of upper edges of the forward and rearward walls, and wherein the means for moving the front wall is connected between the front wall and support beam.
4. The apparatus of claim 3 wherein said front wall is pivotally mounted along an upper edge to said support beam.
5. The apparatus of claim 4 further comprising a tailgate pivotally connected to said frame rearward end for movement between a generally vertically oriented storage position and a loading position sloped from said frame to a ground surface.
6. The apparatus of claim 5 wherein said tailgate includes a support frame and a rigid sheet extending across the frame to form a surface for loading equipment onto said frame.
7. The apparatus of claim 6 wherein said wheeled frame means includes a flat bed mounted on said frame, extending from the dump box to said frame rearward end.

8. The apparatus of claim 7 further comprising means for selectively pivoting the tailgate, connected between the tailgate and said frame rearward end.

9. The apparatus of claim 8 wherein said tailgate is pivotally mounted along a lower edge of the support frame to said frame rearward end.

10. The apparatus of claim 9 further comprising an operable lock mounted on each frame side member at a rearward end for selectively locking the tailgate in the storage position.

11. The apparatus of claim 10 further comprising a hopper, having an open upper end, opposing front and back walls, opposing side walls and a bottom, operably mounted on the dump box for movement between an upright loading position located on the ground proximal said wheeled frame means, and an inverted dumping position located over the upper end of the dump box.

12. The apparatus of claim 11 further comprising means for selectively moving the hopper between the loading position and the dumping position.

13. The apparatus of claim 12 wherein said means for moving the hopper includes:

first means for lifting the hopper vertically from the loading position to a raised position intermediate the loading and dumping positions; and

second means for pivoting the hopper between the raised position and the dumping position;

said first and second means being independently operable.

14. The apparatus of claim 13 wherein the first means for lifting the hopper includes a lift arm pivotally connected at a first end to the dump box, and a second end connected to the hopper, with an operable cylinder connected between the dump box and the lift arm to pivot the lift arm between raised and lowered positions.

15. The apparatus of claim 14 wherein the hopper is pivotally connected to the lift arm second end, and wherein the second means for pivoting the hopper includes an operable cylinder connected between the hopper and the lift arm.

16. The apparatus of claim 1 further comprising a tailgate pivotally connected to said frame rearward end for move-

2025 RELEASE UNDER E.O. 14176

ment between a generally vertically oriented storage position, and a loading position sloped from said frame to a ground surface.

17. The apparatus of claim 16 further comprising means for selectively pivoting the tailgate, connected between the tailgate and said frame rearward end.

18. The apparatus of claim 1 further comprising a hopper, having an open upper end, opposing front and back walls, opposing side walls and a bottom, operably mounted on the dump box for movement between an upright loading position located on the ground proximal said wheeled frame means, and an inverted dumping position located over the upper end of the dump box.

19. The apparatus of claim 18 further comprising means for selectively moving the hopper between the loading position and the dumping position.

20. The apparatus of claim 19 wherein said means for moving the hopper includes:

first means for lifting the hopper vertically from the loading position to a raised position intermediate the loading and dumping positions; and

second means for pivoting the hopper between the raised position and the dumping position;

said first and second means being independently operable.

21. The apparatus of claim 20 wherein the first means for lifting the hopper includes a lift arm pivotally connected at a first end to the dump box, and a second end connected to the hopper, with an operable cylinder connected between the dump box and the lift arm to pivot the lift arm between raised and lowered positions.

22. The apparatus of claim 20 wherein the hopper is pivotally connected to the lift arm second end, and wherein the second means for pivoting the hopper includes an operable cylinder connected between the hopper and the lift arm.

23. The apparatus of claim 1 wherein said wheeled frame means comprises a truck.

24. The apparatus of claim 1 wherein said wheeled frame means comprises a trailer.

\* \* \* \* \*

25.

A yard waste handling apparatus, comprising:

a wheeled frame means having a frame with forward and rearward ends, and

opposing side members;

a dump box operably mounted on said frame for pivotal movement between a

loading position at rest on said frame and a dumping position pivoted

relative to said frame;

said dump box having an open upper end, opposing forward and rearward walls,

opposing front and back walls, and a bottom;

said dump box front wall operably connected to the dump box for movement

between open and closed positions; and

means for selectively pivoting the dump box, connected between the dump box

and said frame; and

means for selectively moving the dump box front wall, connected between the

front wall and dump box.

26.

The apparatus of claim 25 further comprising a hopper, having an open upper end, opposing front and back walls, opposing side walls and a bottom, operably mounted on the dump box for movement between an upright loading position located on the ground proximal said wheeled frame means, and an inverted dumping position located over the upper end of the dump box.

27.

The apparatus of claim 26 further comprising means for selectively moving the hopper between the loading position and the dumping position.

28.

The apparatus of claim 27 wherein said means for moving the hopper includes:

first means for lifting the hopper vertically from the loading position to a raised position intermediate the loading and dumping positions; and

second means for pivoting the hopper between the raised position and the dumping position;

said first and second means being independently operable.

29.

The apparatus of claim 28 wherein the first means for lifting the hopper includes a lift arm pivotally connected at a first end to the dump box, and a second end connected to the hopper, with an operable cylinder connected between the dump box and the lift arm to pivot the lift arm between raised and lowered positions.

30.

The apparatus of claim 29 wherein the hopper is pivotally connected to the lift arm second end, and wherein the second means for pivoting the hopper includes an operable cylinder connected between the hopper and the lift arm.